

WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:
synthesizing means for synthesizing a first pixel
5 with a second pixel so as to generate a new pixel based
on a transmissivity indicative of a ratio of the first
pixel to the second pixel in the new pixel; and
attribute determination means for determining an
attribute of the new pixel based on attribute data of
10 the first pixel, attribute data of the second pixel, and
the transmissivity.
2. The image processing apparatus according to claim
1, wherein in a case where the transmissivity is higher
15 than a threshold value, said attribute determination
means determines the attribute data of the second pixel
as attribute data of the new pixel, whereas in a case
where the transmissivity is lower than the threshold
value, said attribute determination means determines the
20 attribute data of the first pixel as the attribute data
of the new pixel.
3. The image processing apparatus according to claim
1, wherein in a case where the transmissivity is higher
25 than a first threshold value, said attribute
determination means determines the attribute data of the

second pixel as the attribute data of the new pixel,

in a case where the transmissivity is lower than a second threshold value which is lower than the first threshold value, said attribute determination means

- 5 determines the attribute data of the first pixel as the attribute data of the new pixel, and

in a case where the transmissivity is lower than the first threshold value but higher than the second threshold value, said attribute determination means

- 10 determines attribute data of a pixel having a higher priority as the attribute data of the new pixel.

4. The image processing apparatus according to claim 2, wherein said attribute determination means determines
15 the threshold value in accordance with a combination of values of the attribute data of the first pixel and the second pixel.

5. The image processing apparatus according to claim
20 1, further comprising image processing means for performing image processing on a pixel, obtained by said synthesizing means, based on the attribute data of the pixel.

- 25 6. The image processing apparatus according to claim 5, wherein the processing performed by said image

processing means includes color conversion processing.

7. The image processing apparatus according to claim
5, wherein the processing performed by said image
5 processing means includes pseudo-tone processing.

8. The image processing apparatus according to claim
1, further comprising output means for outputting an
image, constructed with a pixel, synthesized by said
10 synthesizing means and having an attribute determined by
said attribute determination means.

9. The image processing apparatus according to claim
8, wherein said output means is printing means.

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10. An image processing method comprising:
a synthesizing step of synthesizing a first pixel
with a second pixel so as to generate a new pixel based
on a transmissivity indicative of a ratio of the first
20 pixel to the second pixel in the new pixel; and

an attribute determination step of determining an
attribute of the new pixel based on attribute data of
the first pixel, attribute data of the second pixel, and
the transmissivity.

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11. The image processing method according to claim 10,

wherein in said attribute determination step, in a case where the transmissivity is higher than a threshold value, the attribute data of the second pixel is determined as attribute data of the new pixel, whereas
5 in a case where the transmissivity is lower than the threshold value, the attribute data of the first pixel is determined as the attribute data of the new pixel.

12. The image processing method according to claim 10,
10 wherein in said attribute determination step, in a case where the transmissivity is higher than a first threshold value, the attribute data of the second pixel is determined as the attribute data of the new pixel,
in a case where the transmissivity is lower than a
15 second threshold value which is lower than the first threshold value, the attribute data of the first pixel is determined as the attribute data of the new pixel,
and

in a case where the transmissivity is lower than
20 the first threshold value but higher than the second threshold value, attribute data of a pixel having a higher priority is determined as the attribute data of the new pixel.

25 13. The image processing method according to claim 11, wherein in said attribute determination step, the

threshold value is determined in accordance with a combination of values of the attribute data of the first pixel and the second pixel.

- 5 14. The image processing method according to claim 10, further comprising an image processing step of performing image processing on a pixel, obtained in said synthesizing step, based on the attribute data of the pixel.
- 10 15. The image processing method according to claim 14, wherein the processing performed in said image processing step includes color conversion processing.
- 15 16. The image processing method according to claim 14, wherein the processing performed in said image processing step includes pseudo-tone processing.
- 20 17. The image processing method according to claim 10, further comprising an output step of outputting an image, constructed with a pixel synthesized in said synthesizing step and having an attribute determined in said attribute determination step.
- 25 18. The image processing method according to claim 17, wherein in said output step, printing is performed by a

printing engine.

19. A computer program realizing:

synthesizing means for synthesizing a first pixel
5 with a second pixel so as to generate a new pixel based
on a transmissivity indicative of a ratio of the first
pixel to the second pixel in the new pixel; and

attribute determination means for determining an
attribute of the new pixel based on attribute data of
10 the first pixel, attribute data of the second pixel, and
the transmissivity.

20. The computer program according to claim 19,
wherein in a case where the transmissivity is higher
15 than a threshold value, said attribute determination
means determines the attribute data of the second pixel
as attribute data of the new pixel, whereas in a case
where the transmissivity is lower than the threshold
value, said attribute determination means determines the
20 attribute data of the first pixel as the attribute data
of the new pixel.

21. The computer program according to claim 19,
wherein in a case where the transmissivity is higher
25 than a first threshold value, said attribute
determination means determines the attribute data of the

second pixel as the attribute data of the new pixel,

in a case where the transmissivity is lower than a second threshold value which is lower than the first threshold value, said attribute determination means

- 5 determines the attribute data of the first pixel as the attribute data of the new pixel, and

in a case where the transmissivity is lower than the first threshold value but higher than the second threshold value, said attribute determination means

- 10 determines attribute data of a pixel having a higher priority as the attribute data of the new pixel.

22. The computer program according to claim 20, wherein said attribute determination means determines

- 15 the threshold value in accordance with a combination of values of the attribute data of the first pixel and the second pixel.

23. The computer program according to claim 19,

- 20 further comprising image processing means for performing image processing on a pixel, obtained by said synthesizing means, based on the attribute data of the pixel.

- 25 24. The computer program according to claim 23, wherein the processing performed by said image

processing means includes color conversion processing.

25. The computer program according to claim 23,
wherein the processing performed by said image

5 processing means includes pseudo-tone processing.

26. The computer program according to claim 19,
further comprising output means for outputting an image,
constructed with a pixel synthesized by said

10 synthesizing means and having an attribute determined by
said attribute determination means.

27. A computer-readable storage medium storing a
computer program, said computer program comprising:

15 a synthesizing step of synthesizing a first pixel
with a second pixel so as to generate a new pixel based
on a transmissivity indicative of a ratio of the first
pixel to the second pixel in the new pixel; and

an attribute determination step of determining an
20 attribute of the new pixel based on attribute data of
the first pixel, attribute data of the second pixel, and
the transmissivity.

28. The storage medium according to claim 27, wherein
25 in said attribute determination step, in a case where
the transmissivity is higher than a threshold value, the

attribute data of the second pixel is determined as
attribute data of the new pixel, whereas in a case where
the transmissivity is lower than the threshold value,
the attribute data of the first pixel is determined as
5 the attribute data of the new pixel.

29. The storage medium according to claim 27, wherein
in said attribute determination step, in a case where
the transmissivity is higher than a first threshold
10 value, the attribute data of the second pixel is
determined as the attribute data of the new pixel,

in a case where the transmissivity is lower than a
second threshold value which is lower than the first
threshold value, the attribute data of the first pixel
15 is determined as the attribute data of the new pixel,
and

in a case where the transmissivity is lower than
the first threshold value but higher than the second
threshold value, attribute data of a pixel having a
20 higher priority is determined as the attribute data of
the new pixel.

30. The storage medium according to claim 28, wherein
in said attribute determination step, the threshold
25 value is determined in accordance with a combination of
values of the attribute data of the first pixel and the

second pixel.

31. The storage medium according to claim 27, said
computer program further comprising an image processing
5 step of performing image processing on a pixel, obtained
in said synthesizing step, based on the attribute data
of the pixel.

32. The storage medium according to claim 31, wherein
10 the processing performed in said image processing step
includes color conversion processing.

33. The storage medium according to claim 31, wherein
the processing performed in said image processing step
15 includes pseudo-tone processing.

34. The storage medium according to claim 27, said
computer program further comprising an output step of
outputting an image, constructed with a pixel
20 synthesized in said synthesizing step and having an
attribute determined in said attribute determination
step.

35. The image processing apparatus according to claim
25 1, wherein the first pixel is a pixel of an image
generated based on print data received from a host

computer, and the second pixel is a pixel of a form image stored in advance in said image processing apparatus.

5 36. The image processing apparatus according to claim 1, wherein a value of the attribute data is any one of a character, a graphic, or an image.

37. An image processing apparatus comprising:
10 an input interface unit to which print data is inputted;
first memory for storing form image data;
a processing unit for generating input image data based on the print data, synthesizing the input image
15 data with the form image data based on a designated transmissivity, and determining attribute data of synthesized image data based on attribute data of the input image data, attribute data of the form image data, and the transmissivity; and
20 second memory for storing image data generated by said processing unit and attribute data of the image data.